

Art Unit: 3654

CLMPTO 070803 AEC

Claims:

BEST AVAILABLE COPY

1. Process for the automatic removal of packages from a winding station of a yarn winding machine, comprising means (1) for holding and disengaging a full package (2), a package guide (3) guiding the yarn to be wound during winding, a bar (7) for disengagement from the winding guide (3), a package drive (4), heads (5) for gripping and holding a spool (6) and a device (7) for supplying the station with spools (6), characterized in that it consists essentially in providing, during each removal cycle, a relaxation of the tension of the supply yarn, then restarting a new winding cycle after completion of the removal.

2. Process according to claim 1, characterized in that the relaxation of the tension of the supply yarn is carried out during stopping of winding, namely during the phase of deceleration of the package or upon total stoppage of the package, or again after total stoppage of the package before disengagement of the full package or during this disengagement or just after the disengagement.

3. Process according to claim 2, characterized in that the relaxation of the tension of the supply yarn is carried out, by driving the package (1) in the reverse direction of its winding rotation, by means of the package drive (4), which is actuated in the opposite direction, for a short period of time, by means of a mechanical, electrical, electronic or like reverser.

BEST AVAILABLE COPY

4. Process according to claim 2, characterized in that the relaxation of the tension of the supply yarn is carried out after total stopping of the package, during disengagement of the full package (2) by the relaxation of the tension of the supply yarn upstream of the winding station.

5. Process according to claim 2, characterized in that the relaxation of the tension of the supply yarn is carried out by action on the path of the yarn upstream of the winding guide (3), the assembly of the drive motors for winding, the winding guide and the pre-supply being stopped.

6. Process according to claim 5, characterized in that obtaining the relaxation is carried out by a relative displacement of the different deflection cylinders forming the pre-supply in the direction of shortening the path of the yarn during stopping.

7. Process according to claim 5, characterized in that obtaining the relaxation is carried out by action on the length of the path of the yarn by provision of one or several deflection cylinders along said path, these deflection cylinders being movable outside a rectilinear path.

8. (amended) Process according to claim 3, characterized in that the relaxation of the tension of the supply yarn is carried out upstream of the winding station.

9. (amended) Process according to claim 3, characterized in that the relaxation of the tension of the supply yarn is effected, by driving the package (2) in the reverse direction of its winding rotation, by means of the package drive (4), which is actuated in the opposite direction, for a short period of time, by means of a mechanical, electrical, electronic or like reverser.

10. (amended) Process according to claim 2, characterized in that the relaxation of the tension of the supply yarn is carried out effected by action on the path of the yarn upstream of the winding guide (3), the assembly of the drive motors for winding, for the winding guide and for the pre-supply being stopped.

Rule 1.26

11
12

(amended) Process according to claim 9, characterized in that the different controls for reversing the

operation of the package drive (4) or the movement of the different deflection cylinders is carried out automatically.

Art Unit:3651

¹²
--~~11~~. (new). Process according to claim 12, characterized
in that the different controls for reversing the operation of
the package drive (4) or the movement of the different
deflection cylinders is carried out automatically.--

BEST AVAILABLE COPY